

force applied on it, which simplifies the identification of the intention of a user to move the object.

**[0027]** According to claim 5 the vertical force applied on the first object by the touching member is detected and determining of if the first object is to be moved is based on the vertical force applied. This feature has the advantage of allowing the discrimination between if a selection has been made to move an object or to activate the object.

**[0028]** According to claim 6 the touching member is detected if it is at least being in close proximity of at least one first display element of the first object and the distancing factor is determined via determining the location of the first display element in relation to at least one second center display element of the first object. This feature allows a simple and effective determination of if an object is to be moved if forces cannot be detected.

**[0029]** According to claim 7 the object is presented at intermediate locations along the direction between the first and the second locations. This feature has the advantage of presenting the movement of the object in a continuous user friendly way.

**[0030]** According to claim 8 the touch input display device comprises a set of objects, wherein the detecting of a touching member, determining of a distancing factor and moving are performed for a second object, whereupon rearranging takes place of the other objects of the set based on the movement of the first and second objects. This feature has the advantage of allowing a simple rearranging of a whole set of objects based on the movement of a limited number of objects and is thus very user friendly.

**[0031]** The basic idea of the present invention is to detect a touching member at least being in close proximity of an object provided by a touch input display device, to determine a distancing factor of the object caused by the detection, and move the object in a direction and a distance selected according to the distancing factor. In this way rearranging of objects is allowed for satisfying the needs of a user.

**[0032]** The above mentioned and other aspects of the invention will be apparent from and elucidated with reference to the embodiments described hereinafter.

#### BRIEF DESCRIPTION OF THE DRAWINGS

**[0033]** The present invention will be further described in relation to the accompanying drawings, in which:

**[0034]** FIG. 1 schematically shows a general touch input display device,

**[0035]** FIG. 2 schematically shows main units of a touch input display device according to a first embodiment of the present invention,

**[0036]** FIG. 3 schematically shows main units of a touch input display device according to a second embodiment of the present invention,

**[0037]** FIG. 4 schematically shows main units of a touch input display device according to a third embodiment of the present invention,

**[0038]** FIG. 5 shows the provision of an object on a display of a touch input display device,

**[0039]** FIG. 6A schematically shows the provision of an object on a touch input display device according to the third embodiment before being touched by a user,

**[0040]** FIG. 6B schematically shows the provision of the object on the touch input display device according to the third embodiment as it is being touched by a user,

**[0041]** FIG. 6C schematically shows the moving of the object on the touch input display device according to the third embodiment after being touched by a user,

**[0042]** FIG. 7 shows a flow chart of a method of moving an object according to the third embodiment,

**[0043]** FIG. 8 schematically shows a number of objects on a display, where two are being moved by a user,

**[0044]** FIG. 9 schematically shows the objects of FIG. 8, where the rest of the objects have been moved in line with the objects moved by the user, and

**[0045]** FIG. 10 schematically shows a computer program product in the form of a CD Rom disc comprising computer program code for performing the present invention.

#### DETAILED DESCRIPTION OF THE INVENTION

**[0046]** The present invention is generally directed towards touch input display devices and more particularly towards touch input display devices arranged to move objects when being activated by a user.

**[0047]** FIG. 1 schematically shows a touch input display device 10 in the form of a PDA (Personal Digital Assistant) having a display 12 on which touch inputs can be made. The display here shows a keypad 14 with keys that can be selected as well as a general information display window 15, where the window shows information relating to inputs made via the keypad 14. It should be realized that this is just one variation of a touch input display device. There can be several other types, like a touch input display device in a lap top computer or in a cellular phone as well as a touch input display device being connected to a PC or other type of computer. The display is made up of a number of display elements, here in the form of pixels. Some of these elements are then showing information in the form of objects, like keys or icons. For each display element there is furthermore provided an input element that can receive touch inputs. When an area displaying an object is then touched some actions are performed for that object.

**[0048]** FIG. 2 schematically shows the main units of a touch input display device according to a first embodiment of the present invention. The display 12 includes a number of layers 20, 22 and 26. The device furthermore includes a control unit 16 for controlling display of information and determination of touched objects. The display 12 includes an information presentation unit in the form of a first information presentation layer 26 on which information is displayed via a display driving unit 24 under the control of the control unit 16. The information presentation layer 26 is preferably provided in the form of an LCD display (Liquid Crystal Display) and then of a TFT type, although the invention is in no way limited to this. It can just as well another type, like a CRT. There is also provided a touch detecting unit in the form of first and a second information receiving plates 20, 22, of which at least the first 20 is flexible. The two plates are connected to an information reading unit 18, which in turn is connected to the control unit 16. This display works in the way that a depressing of the first plate 20 makes it come in contact with the second plate 22. The position of the contact is then converted to an electric signal that is fed to the control unit 16 by the information reading unit 18, thus enabling registering of the position as a selection of a displayed object. It is here also sometimes possible to detect the pressure with which the first plate 20 is depressed. This type of display is the normal touch input display used in many touch input display devices.